

CLAIMS

What is claimed is:

1. A method of suspending the onset of type 1 diabetes in a subject that has undergone IAA seroconversion, the method comprising administering to the subject a pharmaceutically acceptable composition comprising at least one immunoglobulin selected from the group consisting of INS, GAD, an insulin protein, a peptide derived from insulin, a diabetogenic epitope, and a T cell receptor engaging determinant; wherein the composition is administered to the subject in one or more dosage administrations.
2. The method of claim 1, wherein the immunoglobulin is human or humanized.
- 10 3. The method of claim 1, wherein the subject is a human subject.
4. The method of claim 1, wherein the administration of the composition to the subject results in down regulation of an autoreactive T cell.
5. The method of claim 1, wherein a peptide is inserted within a variable region of the immunoglobulin.
- 15 6. The method of claim 5, wherein the variable region of the immunoglobulin comprises a CDR1, a CDR2, or a CDR3 region.
7. The method of claim 5, wherein activation of an autoreactive T cell specific for the peptide is substantially reduced or prevented.
8. The method of claim 1, wherein the INS comprises INS β .
- 20 9. The method of claim 8, wherein the INS β is soluble.

10. The method of claim 9, wherein the soluble INS β is capable of binding to at least one Fc receptor.
11. The method of claim 10, wherein the Fc receptor is a Fc γ receptor.
12. The method of claim 10, wherein the composition is endocytosed by antigen
5 presenting cells.
13. The method of claim 1, wherein the GAD comprises GAD 1, GAD2, or GAD65.
14. The method of claim 1, wherein the subject is IAA-positive.
15. The method of claim 1, wherein the subject is GAD positive.
16. The method of claim 1, wherein the subject has not developed hyperglycemia.
- 10 17. The method of claim 1, wherein the subject expresses a type 1 diabetes predisposition marker.
18. The method of claim 1, wherein upon administration of the composition to the subject, the subject undergoes a dose dependent suspension, prevention, or delay in the onset of type 1 diabetes.
- 15 19. The method of claim 1, wherein the administration of the composition occurs before the type-1 diabetes progresses to an irreversible stage.
20. A composition for suppressing the onset of type 1 diabetes in a subject that has undergone IAA seroconversion, the composition comprises: a pharmaceutically acceptable composition comprising at least one immunoglobulin selected from the group consisting of
20 INS, GAD, an insulin protein, a peptide derived from insulin, a diabetogenic epitope, and a T cell receptor engaging determinant.